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Christopher I Walsh W. Blake Coblentz* James J. Pohl Young Tang John T. Haran+ Mark W. Rygiel Registered Patent Agents Karen R. Markowicz Matthew J. Dowd Katrina Yuiian Pei Ouach Bryan L. Skelton Robert A. Schwartzman Victoria S. Rutherford

Simon I. Elliott

Julie A. Heider

Mita Mukherjee

Scott M. Woodhouse

Liliana Di Nola-Baror Peter A. Socarras Jeffrey K. Mills Danielle L. Letting Lori Brandes

Of Counsel Edward J. Kessler Kenneth C. Bass III Marvin C. Guthrie

*Admitted only in Maryland Admitted only in Virginia Practice Limited to Federal Agencies

February 2, 2007

WRITER'S DIRECT NUMBER: (202) 772-8525 INTERNET ADDRESS: BRIAND@SKGF.COM

Art Unit 1644

Attn: Mail Stop Amendment

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

U.S. Utility Patent Appl. No.: 10/563,944; § 371 Date: May 31, 2006

(U.S. Nat'l Phase of Int'l Appl. No. PCT/EP04/07679; I.A. Date: July 12, 2004)

Packaged Virus-Like Particles For: Inventors: Martin F. BACHMANN et al. Our Ref:

1700.0670000/BJD/WBC

Sir:

Transmitted herewith for appropriate action are the following documents:

- 1. Information Disclosure Statement Filing Under 37 C.F.R. § 1.97(b);
- 2. Form PTO/SB/08A (2 pages) citing twenty-eight (28) documents (US1-US15 and FP1-FP13);
- 3. Copy of thirteen (13) cited documents (FP1-FP13):
- 4. Form PTO/SB/08B (7 pages) citing fifty-eight (58) documents (NPL1-NPL58);
- 5. Copy of fifty-eight (58) cited documents (NPL1-NPL58); and
- 6. One (1) return postcard.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Sterne, Kessler, Goldstein & Fox PLLC. : 1100 New York Avenue, NW : Washington, DC 20005 : 202.371.2600 f 202.371.2540 : www.skgf.com

Commissioner for Patents February 2, 2007 Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

Sterne, Kessler, Goldstein & Fox P.L.L.C.

Brian J. Del Buono Attorney for Applicants Registration No. 42,473

BJD/WBC:cpn Enclosures 613490_1.DOC

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ubstitute for form 1449A/PTO Complete if Known 10/563,944 (U.S. Nat'l Phase of Int'l Application Number Appl. No. PCT/EP04/07679) INFORMATION DISCLOSURE May 31, 2006 §371 Date STATEMENT BY APPLICANT First Named Inventor BACHMANN, Martin F. (Use as many sheets as necessary) Art Unit 1644 **Examiner Name** To Be Assigned Sheet 1 of 2 Attorney Docket Number 1700.0670000/BJD/WBC

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Examiner	Cite	Document Number	U.S. PATENT DO Publication Date	Name of Patentee or	Pages, Columns, Lines,
Initials*	No.1	Number-Kind Code ^{2 (If Known)}	MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear
	US1	4,912,094	03/27/1990	Myers et al.	
	US2	5,939,598	08/17/1999	Kucherlapati et al.	
	US3	6,194,388	02/27/2001	Krieg et al.	
	US4	6,207,646	03/27/2001	Krieg et al.	
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	US12	2004/0234512 A1	11/25/2004	Wagner et al.	
	US13	2004/0235777 A1	11/25/2004	Wagner et al.	
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Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where	
					Relevant Passages or Relevant Figures Appear	T ⁶
	FP1	WO 98/50071 A1	11/12/1998	Chiron Corporation		
	FP2	WO 99/29723 A1	06/17/1999	Pentamer Pharmaceuticals		
	FP3	WO 00/23955 A1	04/27/2000	The Government of the United States of America		
	FP4	WO 00/32227 A2	06/08/2000	Cytos Biotechnology AG		
	FP5	WO 00/37610 A2	06/29/2000	Boyce Thompson Institute for Plant Research at Cornell		
	FP6	WO 00/39304 A2	07/06/2000	Chiron Corporation		
	FP7	WO 00/62800 A2	10/26/2000	Smithkline Beecham Biologicals SA		
	FP8	WO 01/22972 A2	04/05/2001	University of Iowa Research Foundation; Coley Pharmaceutical GMBH		

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Substitute for form 1449A/PTO	Complete	e if Known
INFORMATION DISCLOSURE	Application Number	10/563,944 (U.S. Nat'l Phase of Int'l Appl. No. PCT/EP04/07679)
INFORMATION DISCLOSURE	§371 Date	May 31, 2006
STATEMENT BY APPLICANT	First Named Inventor	BACHMANN, Martin F.
(Use as many sheets as necessary)	Art Unit	1644
	Examiner Name	To Be Assigned
Sheet 2 of 2	Attorney Docket Number	1700.0670000/BJD/WBC

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		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T ²
	NPL1	Abreu, M.T., and Arditi, M. J., "Innate Immunity and Toll-like Receptors: Clinical Implications of Basic Science Research," <i>Pediatrics 144</i> :421-9, American Academy of Pediatrics (April 2004)	
	NPL2	Alexopoulou, L., et al., "Recognition of double-stranded RNA and activation of NF-kappaB by Toll-like receptor 3," <i>Nature 413</i> :732-8, Nature Publishing Group (2001)	
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	NPL8	Beutler, B., "Toll-like receptors: how they work and what they do," Curr. Opin. Hematol. 9:2-10, Lippincott Williams And Wilkins (January 2002)	
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Examiner	Date	
Signature	Considered	

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INFORM	ATION	DISC	CLOSURE	Application Number	10/563,944 (U.S. Nat'l Phase of Int'l Appl. No. PCT/EP04/07679)
				§371 Filing Date	May 31, 2006
				First Named Inventor	BACHMANN, Martin F.
,	,		27	Art Unit	1644
				Examiner Name	To Be Assigned
Sheet	2	of	7	Attorney Docket Number	1700.0670000/BJD/WBC

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Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T ²
	NPL10	Clarke, A.H., et al., "Murine Allergic Respiratory Responses to the Major House Dust Mite Allergen Der p 1," Int. Arch. Allergy Immunol. 120:126-134, Karger (1999)	
	NPL11	Cohen, P.A., et al., "CD4+ T-Cells from Mice Immunized to Syngeneic Sarcomas Recognize Distinct, Non-Shared Tumor Antigens," Cancer Res. 54:1055-8, American Association for Cancer Research (1994)	
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No de contra de la companya de la co	NPL13	Diebold, S.S., et al. "Innate Antiviral Responses by Means of TLR7-Mediated Recognition of Single-Stranded RNA," Science 303:1529-31, American Association for the Advancement of Science (March 2004)	
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	NPL15	Eriksson, T.L., et al.," T cell responses to recombinant isoforms, synthetic peptides and a mutant variant of Lep d 2, a major allergen from the dust mite Lepidoglyphus destructor," Clin. Exp. Allergy 31:1881-1890, Blackwell Scientific Publications (2001)	_
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	NPL18	Fitchen, J., et al., Plant virus expressing hybrid coat protein with added murine epitope elicits autoantibody response," Vaccine 13:1051-7, Elsevier Science (1995)	

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Signature	Considered	

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	NPL19	Gerber, S., et al., "Human Papillomavirus Virus-Like Particles Are Efficient Oral Immunogens when Coadministered with Escherichia coli Heat-Labile Enterotoxin Mutant R192G or CpG DNA," J. Virol. 75:4752-60, American Society for Microbiology (2001)	
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	NPL21	Gluckman, J. C., et al., "In vitro generation of human dendritic cells and cell therapy," Cytokines Cell. Mol. Ther. 3:187-96, Martin Dunitz Ltd. (1997)	
	NPL22	Hayashi, F., et al., "The innate immune response to bacterial flagellin is mediated by Toll-like receptor 5," Nature 410:1099-103, Nature Publishing Group (2001)	
	NPL23	Heil, F.H., et al., "Species-Specific Recognition of Single-Stranded RNA via Toll-like Receptor 7 and 8," Science 303:1526-9, American Association for the Advancement of Science (March 2004)	
	NPL24	Hemmi, H., et al., "A Toll-like receptor recognizes bacterial DNA," Nature 408: 740-5, Nature Publishing Group (2000)	
	NPL25	Ioannou, X.P., et al., "CpG-containing oligodeoxynucleotides, in combination with conventional adjuvants, enhance the magnitude and change the bias of the immune responses to a herpesvirus glycoprotein," Vaccine 21:127-37, Elsevier Science (November 2002)	
	NPL26	Johnson, D.A., et al., "3-O-Desacyl Monophosphoryl Lipid A Derivatives: Synthesis and Immunostimulant Activities," J. Med. Chem. 42:4640-649, American Chemical Society (1999)	
	NPL27	Justice, J.P., et al., "Ragweed-induced expression of GATA-3, IL-4, and IL-5 by eosinophils in the lungs of allergic C57BL/6J mice," Am. J. Physiol. Lung Cell Mol. Physiol. 282:L302-9, The American Physiological Society (February 2002)	

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	NPL28	Kaisho, T., and Akira, S., "Toll-like receptors as adjuvant receptors," <i>Biochim. Biophys. Acta 1589</i> :1-13, Elsevier Pub. Co. (February 2002)	
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	NPL33	Li, X.M., et al., "A murine model of peanut anaphylaxis: T- and B-cell responses to a major peanut allergen mimic human responses," J. Allergy Clin. Immunol. 106:150-58, Mosby (2000)	
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INFORM	MATION	DISC	CLOSURE	Application Number	10/563,944 (U.S. Nat'l Phase of Int'l Appl. No. PCT/EP04/07679)	
	STATEMENT BY APPLICANT (Use as many sheets as necessary)			§371 Filing Date	May 31, 2006	
SIMIL				First Named Inventor	BACHMANN, Martin F.	
(Ose as many sneeds as necessary)				Art Unit	1644	
•		Examiner Name	To Be Assigned			
Sheet	5	of	7	Attorney Docket Number	1700.0670000/BJD/WBC	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published	T^2
	NPL37	Persing, D.H., et al., "Taking toll: lipid A mimetics as adjuvants and immunomodulators," Trends Microbiol. 10:32-37, Elsevier Trends Journals (October 2002)	
	NPL38	Poltorak, A., et al., "Defective LPS Signaling in C3H/HeJ and C57BL/10ScCr Mice: Mutations in Tlr4 Gene," Science 282:2085-8, American Association for the Advancement of Science (1998)	
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	NPL46	Shampain, M.P., et al., "An Animal Model of Late Pulmonary Responses to Alternaria Challenge," Am. Rev. Respir. Dis. 126:493-98, American Lung Association (1982)	
-	NPL47	Speiser, D.E., et al., "Self Antigens Expressed by Solid Tumors Do Not Efficiently Stimulate Naive or Activated T Cells: Implications for Immunotherapy," J. Exp. Med. 186:645-53, The Rockefeller University Press (1997)	
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	NPL51	Underhill, D.M., et al., "The Toll-like receptor 2 is recruited to macrophage phagosomes and discriminates between pathogens," Nature 401:811-5, Nature Publishing Group (1999)	
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	NPL53	Vailes, L.D., et al., "IgE and IgG antibody responses to recombinant Alt a 1 as a marker of sensitization to Alternaria in asthma and atopic dermatitis," Clin. Exp. Allergy 31:1891-95, Blackwell Scientific Publications (2001)	
	NPL54	Vailes, L.D., et al., "Quantitation of the major fungal allergens, Alt a 1 and Asp f 1, in commercial allergenic products," J. Allergy Clin. Immunol. 107:641-6, Mosby (2001)	

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Sheet	7	of	7	Attorney Docket Number	1700.0670000/BJD/WBC

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NPL55	Van Schooten, W.C., et al., "Biological properties of dendritic cells: implications to their use in the treatment of cancer," Molecular Medicine Today 3:254-60, Elsevier Trends Journals (1997)	
NPL56	Yamamoto, S., et al., "The discovery of immunostimulatory DNA sequence," Springer Semin. Immunopathol. 22:11-19, Springer Verlag (2000)	
NPL57	Yuan, T.T., et al., "Subtype-Independent Immature Secretion and Subtype-Dependent Replication Deficiency of a Highly Frequent, Naturally Occurring Mutation of Human Hepatitis B Virus Core Antigen," J. Virol. 73:10122-8, American Society for Microbiology (1999)	
NPL58	Zhang, D., et al., "A Toll-like Receptor That Prevents Infection by Uropathogenic Bacteria," Science 303:1522-6, American Association for the Advancement of Science (March 2004)	
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	No.¹ NPL55 NPL56 NPL57	Cite No. Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume number, publisher, city and/or country where published Van Schooten, W.C., et al., "Biological properties of dendritic cells: implications to their use in the treatment of cancer," Molecular Medicine Today 3:254-60, Elsevier Trends Journals (1997) Yamamoto, S., et al., "The discovery of immunostimulatory DNA sequence," Springer Semin. Immunopathol. 22:11-19, Springer Verlag (2000) Yuan, T.T., et al., "Subtype-Independent Immature Secretion and Subtype-Dependent Replication Deficiency of a Highly Frequent, Naturally Occurring Mutation of Human Hepatitis B Virus Core Antigen," J. Virol. 73:10122-8, American Society for Microbiology (1999) Zhang, D., et al., "A Toll-like Receptor That Prevents Infection by Uropathogenic Bacteria," Science 303:1522-6, American Association for the Advancement of Science

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